

REMARKS

Upon entry of this amendment, claims 22, 32, 33, 36-41, 51, 55-61 and 64-74 will be pending and under consideration.

Claims 1, 9-14, 16-18, 23, 34, 35, 42-50 and 62-63 have been canceled herein without prejudice. Applicants fully reserve their rights to prosecute the subject matter to which these claims are directed in a related application.

Claims 22, 32, 33, 36-41, 51 and 55-61 have been amended and new claims 64-74 have been added to more clearly claim the invention described in the specification and claims as originally filed. In particular, claim 22 has been amended to recite a method of treating an infection of the lower respiratory tract comprising, administering to a patient in need thereof, an amount of liposomes sufficient to treat the infection, said liposomes containing povidone iodine. Support for claim 22, as amended, is found in the specification as originally filed, in particular at, *inter alia*, page 1, lines 6-12; and page 11, lines 1-13. Claims 32, 33, 36-41, 51 and 55-61 have been amended to depend from claim 22 or from a claim that depends from claim 22, to reflect the amendments to claim 22, as well as make the claim language consistent. Claim 38 has also been amended to recited that administration is by inhaling the liposomes. This amendment is supported in the specification, *inter alia*, at 7, line 13.

Support for new claim 64 is found in the specification at page 12, line 17 to page 13, line 5. Support for new claims 65-68 is found in the specification as originally filed, in particular at, *inter alia*, page 11, lines 2-3. Claims 69-72 are supported by the specification at, *inter alia*, page 4, line 27 to page 5, line 15. Claim 73 is supported at page 11, lines 1-21; page 18, line 20 to page 19, line 24. Claim 74 is supported at page 4, lines 22-23. No new matter is added by these amendments to the claims.

1. Rejection under 35 U.S.C. § 112, First Paragraph

Claims 23, 32-39, 42-43, 51 and 55 are rejected under 35 U.S.C. § 112, first paragraph, allegedly, for containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention with regard to methods for functional tissue remodeling, as detailed in the previous office actions.

In response, Applicants note that claims 23, 32, 34, 35, 39 have been canceled without prejudice and claims 33, 36, 37, 38, 42, 43, 51 and 55 have been amended to depend solely from

claim 22. In view of these claim amendments, no claim in the present application is directed to a method of functional tissue remodeling, and, thus, this Section 112 rejection has been obviated. Therefore, Applicants respectfully request its withdrawal.

2. Rejection under 35 U.S.C. § 112, Second Paragraph

Claims 42 and 43 are rejected under 35 U.S.C. § 112, second paragraph, as, allegedly, being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner states that claims 42 and 43 depend from both claims 22 and 23; however, claim 23 is drawn to functional tissue remodeling, which makes the recitation of the treatment of diseases inconsistent with parent claim 23.

In response, Applicants note that claims 42 and 43 have been amended to depend solely from claim 22, and, thus, this Section 112 rejection has been obviated. Therefore, Applicants respectfully request its withdrawal.

3. Double Patenting

The Examiner notes that the obviousness-type double patenting rejections set forth in the previous office action are maintained in abeyance to the filing of a terminal disclaimer. Applicants note that there are two obviousness-type double patenting rejections. One rejection concerns claims 22-24, 26-43 and 51-57, which are provisionally rejected over claims 26, 25, 29-47 and 51-53 of co-pending Application Serial No. 09/701,220. The second rejection concerns claims 1, 2, 4-14, 16-18 and 40-50, which are rejected over claims 1-25 of U.S. Patent No. 5,863,556.

Applicants request that in view of the collective cancellation of claims 1-21 and 44-50 in the present application, the obviousness-type double patenting rejection over claims 1-25 of U.S. Patent No. 5,862,556 has been obviated. With regard to the provisional obviousness-type doubling patenting rejection over co-pending Application Serial No. 09/701,220, Applicants note that since this is a provisional rejection, Applicants will appropriately address the rejection once it is made non-provisionally upon the indication of allowable subject matter in both applications.

4. Rejection under 35 U.S.C. § 102

Claims 1, 9-14, 16-18, 44-50, 58-59 and 62 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by EP 639373, of record.

In response, Applicants note that claims 1, 9-14, 16-18, 44-50 and 62 have been canceled herein without prejudice, and claims 58 and 59 have been amended to depend from claim 22. In view of these amendments to the claims, Applicants submit that this Section 102 rejection has been obviated. Therefore, Applicants respectfully request its withdrawal.

5. Rejection under 35 U.S.C. § 103

Claims 22-23, 32-43, 55-57, 60, 61 and 63 are rejected under 35 U.S.C. § 103(a), allegedly, as obvious over EP 639373 (the '373 patent'), in combination with U.S. Patent No. 5,049,388 to Knight *et al.* ("Knight"), or U.S. Patent No. 5,049,389 to Radhakrishnan ("Radhakrishnan"), or U.S. Patent No. 5,290,540 to Prince and Hemming ("Prince"). According to the Examiner, one of ordinary skill in the art would have been motivated to use povidone iodine as taught in the '373 patent as a drug in the liposomal compositions of Knight, Radhakrishnan or Prince with the expectation of obtaining similar results since povidone iodine is a known anti-septic agent.

Applicants respectfully disagree with the Examiner's rejection. The currently pending claims are directed to methods of treating an infection in the lower respiratory tract by administering liposomes containing povidone iodine. Such methods are not taught, much less suggested, by the references cited by the Examiner. Applicants submit that the rejection is improperly made since there is no suggestion for combining the references.

A rejection for obviousness is improper when there is nothing in the cited prior art references, either singly or in combination, to suggest the desirability of the claimed subject matter. For a rejection of claimed subject matter as obvious in view of a combination of prior art references to be upheld, (1) the prior art must have suggested to those of ordinary skill in the art that they should make the claimed composition or device or use the claimed method, as the case may be; and (2) the prior art must have revealed that in so doing, those of ordinary skill would have had a reasonable expectation of success. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); *In re Dow Chemical Co.*, 837 F.2d 469, 5 USPQ2d 1529 (Fed. Cir. 1988). The suggestion of the claimed invention must be in the prior art, not in the disclosure of the claimed invention. *In re Dow Chemical Co.*, 837 F.2d 469, 5 USPQ2d 1529 (Fed. Cir. 1988).

Moreover, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. Rather to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000). This showing of combinability must be “clear and particular”. *In re Dembiczak*, 175 F.3d 994, 999; 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999).

As has been discussed previously, the ‘373 patent teaches that liposomes containing povidone iodine can be used externally to treat infections. As admitted by the Examiner, the ‘373 patent provides absolutely no teaching for methods of treating an infection internally in the body, much less in the lower respiratory tract. The disclosures of Knight, Radhakrishnan and Prince do not fill in the gap between the ‘373 Patent and the claimed invention. All three references relate to the use of liposomal formulations, *inter alia*, for the treatment of lung diseases. None of these references teaches or suggests liposomes containing povidone iodine, much less that such liposomes can be used in the methods of the invention for treating an infection in the lower respiratory tract. Since there is no teaching or suggestion in the art for using liposomes containing iodine treat infections internally, the Examiner has not met the requirements for a *prima facie* rejection for obviousness.

Moreover, Applicants note that none of the substances taught by Knight, Radhakrishnan or Price to be administered to the lung in liposomes are similar to povidone iodine, which is an aggressive oxidizing antiseptic. The Examiner merely alleges in the office action on page 6 that the teaching in the ‘373 patent for applications to mucous membranes and the eye is “suggestive of the safe application of the compositions even for nasal oral or tracheal mucous tissues.” However, this is mere speculation on the Examiner’s part. Applicants note that the Examiner is wrongly assuming that a compound applicable to the skin and eye is automatically applicable to the alveoli, bronchi and trachea of the lower respiratory tract. It is well known that lung tissue has a different function from, and is very different in structure from skin, and that these two tissues have different sensitivities to different agents. For example, soap or shampoo can be used to cleanse the skin, but they cannot be inhaled. The Examiner’s assumption is false. As noted above, povidone iodine is an aggressively oxidizing antiseptic and none of the cited references teaches or suggests using such an aggressively oxidizing compound in the lower respiratory tract, much less povidone iodine itself.

The Federal Circuit has stated that in determining whether a claim is obvious requires the oft-difficult but critical step of casting the mind back to the time the invention was filed to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with which the invention can be understood may prompt one to fall victim to the insidious effect of hindsight reconstruction wherein that which on the inventor taught is used against its teacher. *In re Dembiczak*, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999). Such hindsight reconstruction does not meet the legal standard for obviousness. It is error to reconstruct the claimed invention from the prior art by using the claims as a blueprint. “When prior art references require selective combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight obtained from the invention itself.” *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 227 U.S.P.Q. 543 (Fed. Cir 1985). Otherwise, simply combining prior art references without evidence of the required suggestion, teaching or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability, which is the essence of hindsight. *In re Dembiczak*, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999).

The Federal Circuit has stated that the best defense against a hindsight-based obviousness analysis is rigorous application for the requirement for a showing of the teaching or motivation to combine the prior art references. *In re Dembiczak*, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999). In the instant application, Applicants submit that the Examiner has not provided the required suggestion, teaching or motivation to combine the teachings of the ‘373 patent with the teachings of Knight, Radhakrishnan or Prince. Thus, Applicants respectfully submit that this Section 103 rejection is in error and must be withdrawn.

CONCLUSION

Applicants respectfully request that the above-made amendments and remarks of the present response be entered and made of record in the file history present application. Applicants submit that the presently pending claims meet all requirements for patentability and respectfully request allowance and action for issuance.

Applicants request that the Examiner call the undersigned at (212) 790-9090 if any questions or issues remain.

Respectfully submitted,

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Enclosures